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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,607	05/02/2001	Paul A. Youngblood	ERT-024-2	5992

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EXAMINER

BRIER, JEFFERY A

ART UNIT PAPER NUMBER

2672

DATE MAILED: 06/21/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,607

Applicant(s)

YOUNGBLOOD ET AL.

Examiner

Jeffery A Brier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on 05/20/2004 has been entered.

Response to Arguments

2. Applicant's arguments, see page 5 concerning the DeNies reference, and the amendment to claim 1 filed 05/20/2004, with respect to the 102 rejection based upon the DeNies reference have been fully considered and are persuasive. The 102 rejection of claims 1, 2, 4 and 6-10 as being anticipated by DeNies has been withdrawn.
3. Applicant's arguments concerning the Hashimoto reference filed 05/20/2004 have been fully considered but they are not persuasive.

On pages 5 to 7 applicant argues Hashimoto teaches using multiple video streams to transmit immersive video and does not teach using one video stream to transmit the immersive video because Hashimoto is concerned with bandwidth. Hashimoto teaches displaying a view window 620 of immersive video streams where each video stream has a repeated portion of another video stream. Hashimoto also teaches to one of ordinary skill in the art a high resolution system that uses a high resolution video stream, see column 4 lines 6-17 and a high resolution system that uses several conventional lower resolution video streams. Hashimoto at column 5 lines 41-63 teaches a system where N may be equal to 1, when N=1, a high resolution system with one high resolution video stream is being described and this video stream is a single video stream formed of time sequential bitmaps each having a repeated portion.

In summary, Hashimoto teaches to one of ordinary skill in the art that irregardless of the number of video streams, a repeated portion is necessary to view an immersive picture.

On page 7 applicant argues Hashimoto does not teach storing the repeated portion together with the immersive picture to form an overlapping immersive picture. However when $N=1$ then Hashimoto teaches storing the immersive picture with the repeated portion in at least video storage medium 914 and video decoder 920. When $N=1$ then the repeated portion together with the immersive picture are stored to form an overlapping immersive picture.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 6-7, 9-14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto, U.S. Patent No. 6,567,086.

Figure 5 illustrates and column 4 lines 28-46 describes overlapping portions of the panoramic picture where overlapping portion are repeated portions of the panoramic

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picture. Figure 6(a) to 6(e) illustrates different locations for view window 620. At column 5 lines 27-49 Hashimoto describes various degrees of overlap and view window sizes.

When $N=1$ then one video stream is present which forms a time sequential bitmap image having an overlapping portion.

A detailed analysis of the claims follows.

Claim 1:

Hashimoto teaches a method for viewing a set of sequential bitmaps (*each video stream is decoded into a bitmap by immersive video decoder 920 since video display circuitry drives a television or computer monitor, column 8 lines 22-32*) comprising:

sequentially playing the set of sequential bitmaps, wherein each sequential bitmap is offset in time (*The video stream over time is decoded into many sequential bitmaps in order to drive the raster television screen or computer monitor.*), and wherein each sequential bitmap includes a repeated portion containing content that is repeated in another portion of the sequential bitmap (*The decoded video stream is decoded into many time sequential bitmaps each having a repeated portion when $N=1$, column 5 lines 41-63, in order to drive the raster television screen or computer monitor to display view window 620.*);

defining a view window (*view window 620*) within each sequential bitmap which defines a portion (*each video stream represents a portion of the*

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whole panoramic picture) of the sequential bitmap under the view window (*see figures 6(a) to 6(e)*); and

allowing the view window to move with respect to the sequential bitmaps as the sequential bitmaps are sequentially played (*as the immersive movie is played the user may move the view window*).

Claim 2:

Hashimoto teaches a 360 degree field of view for each bitmap at column 5 lines 28-49 when N=1.

Claim 3:

Hashimoto teaches each video stream as having 180 degree field of view, thus, this reference teaches the method of claim 1, wherein each sequential bitmap has a 180 degree field of view.

Claim 4:

At column 8 lines 19-21 Hashimoto teaches using software for the immersive video decoder, this software meets the claimed limitation wherein the view window is defined by a standard viewing software package.

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Claim 6:

At column 4 lines 54-55 Hashimoto teaches using cylindrical projection, thus, Hashimoto teaches wherein each sequential bitmap defines a cylindrical space.

Claim 7:

The sequential bitmap derived from each video stream is self-contained.

Claim 9:

Hashimoto teaches the repeated portion has a 40 degree field of view at column 5 lines 50-62 because various sizes of view windows are discussed and the overlap portion is dependent upon the view window size and since this claim is an open ended comprising claim 40 degrees is included in the range of view window sizes described at column 5 lines 50-62.

Claim 10:

Hashimoto teaches the repeated portion is greater than the field of view of the view window, see figure 6.

Claim 11:

Hashimoto teaches a method for viewing an immersive picture (*see the title*) comprising:

defining an immersive picture (*the immersive picture is defined at columns 1 and 2*);

repeating a portion of the content of the immersive picture (*Column 5 lines 28-49 describes overlapping and it is clear the overlapped portions are the same, thus, they are repeated. The decoded video stream is decoded into many time sequential bitmaps each having a repeated portion when N=1, column 5 lines 41-63, in order to drive the raster television screen or computer monitor to display view window 620.*);

storing the repeated portion together with the immersive picture to form an overlapping immersive picture (*Video storage medium 914 described at column 7 lines 59-64 stores multiple overlapping video streams, thus, it stores the repeated portion. When N=1 then Hashimoto teaches storing the immersive picture with the repeated portion in at least video storage medium 914 and video decoder 920. When N=1 then the repeated portion together with the immersive picture are stored to form an overlapping immersive picture.*);

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defining a view window (*view window 620*) within the overlapping immersive picture which defines a portion of the overlapping immersive picture under the view window (*see figures 6(a) to 6(e)*); and

allowing the view window to move with respect to the overlapping immersive picture (*column 8 lines 29-32*).

Claim 12:

See column 8 lines 29-32 which describes displaying the portion of the overlapping immersive picture defined by the view window.

Claim 13:

Hashimoto teaches the method of claim 11, further comprising:

allowing the view window to define a first portion (*See figure 6(a) where video stream 540 is used as the source of the bitmap*) of the overlapping immersive picture near a first edge of the overlapping immersive picture as the view window moves towards the first edge (*as view window moves clockwise, see figure 6(b) the window approaches the beginning of video stream 510*); and

causing the view window to define a second portion (*as the view window 620 moves clockwise the source of the bitmap may be either 540 or 510*) of the overlapping immersive picture (*540 overlaps 510 as the view window 620 moves clockwise*) near a second edge (*the end of 540*) of the

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overlapping immersive picture similar in content to the first portion (*where 540 and 510 overlap the content is similar*) when the view window reaches a first distance from the first edge (*column 5 lines 1-16 describes various methods of switching the source of the bitmap*).

Claim 14:

See the discussion of claim 4 above under this rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, U.S. Patent No. 6,567,086, as applied to claim 4 or 14 above in view of applications admission of MacromediaTM Flash. Hashimoto discusses using software at column 8 lines 19-21 for the immersive video decoder. See the discussion of 4 and 14. Applicant claims using MacromediaTM Flash. It would have been obvious to one of ordinary skill in the art to use MacromediaTM Flash as the viewing software in DeNies because to use a commercial off the shelf software is more economical than developing custom software.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

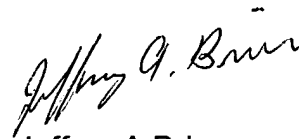
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is 703-305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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Jeffery A Brier
Primary Examiner
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